SYPHILIS IN PREGNANCY

By KENDAL P. FROST, M. D., *Los Angeles*

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DISCUSSION *by Lyle G. McNeile, Los Angeles; J. R. Booth, Oakland.*

IN a general way the problem of syphilis in pregnant women does not differ from the problem in women in other physiological states. The chief difference is the greater difficulty in diagnosis of a latent syphilis and, on account of the child, the greater urgency for active and prolonged treatment.

A pregnant woman may have syphilis of any type and in any stage—early or late, active or latent. As a rule, this infection is conjugal and has been acquired directly from the mate or through an ovum infected through the spermatozoa. However, syphilis acquired during pregnancy is not unknown. In patients where infection occurs after gestation the liability of infection of the fetus decreases with the duration of the pregnancy, and at eight months it may not occur at all.

The usual type of syphilis to be dealt with in pregnant women is the latent type, i. e., in which no active process is demonstrable and in which there may or may not be a positive complement fixation test. The value of the Wassermann reaction in these patients is very uncertain. Those giving repeated positive reactions probably should be considered syphilitic. The lipoid metabolism is, however, affected during pregnancy, particularly cholesterol, which influences the Wassermann reaction. Consequently, without a good history or other findings of syphilis or finding evidence of the disease in the mate, an indefinitely positive reaction should be regarded with the utmost conservatism. Williams states that positive Wassermann reactions occur in 11.2 per cent of all pregnancies; that of these less than half will have syphilitic children. Likewise, one baby in one hundred will have syphilis with the maternal Wassermann reaction negative. He concludes that study of the Wassermann reaction from fetal blood at birth is not worth while, but believes that microscopical study of the placenta is much more valuable—tallying with findings in the child in 80 to 90 per cent of cases. The recently introduced precipitation test, known as the Sachs Georgi reaction, apparently gives fewer false positive reactions than any of the standard modifications of the Wassermann test.

In pregnant women the chief action of the syphilitic virus is the production of abortion or stillbirth. The longer standing the disease, the more liable is there to be a viable fetus, and a healthy child can be born to an untreated syphilitic mother if enough time has elapsed after infection. Organic syphilis of any form may be present in a pregnant woman, and is only of importance as disease of any given organ may affect pregnancy and as it may demand caution in treatment. Treatment should be vigorous and continued throughout pregnancy until about two weeks from term. Pregnant women usually stand active treatment well.

A phenomenon, known as the Herxheimer reaction, is probably responsible for many of the abortions occurring, in consequence of anti-syphilitic treatment. This reaction is characterized by a sudden flareup of an active syphilitic lesion with intensification of all its symptoms and occurring immediately after beginning treatment. It is most characteristically seen after the first arsphenamin injection when not preceded by mercury or iodide. It can be produced by mercury alone, but is not usual unless an initial large dose is used. The mechanism of the Herxheimer reaction is not definitely proved. Theoretically, the rapid action of the drug kills a large number of spirochetes, liberating their toxins with a resultant local aggravation of the lesion and its symptoms. In the placenta this might cause abortion. It can be obviated by a series of mercury injections or rubs—even for a few days, before arsphenamin is given.

Of course, the earlier in pregnancy treatment is instituted, the better are the chances for the child coming to term and for its being healthy. If treatment is begun early and carried through the entire pregnancy, there is practical assurance of a healthy child. Should treatment not be begun until the latter half of pregnancy, it should be continued in the child after birth. The details of treatment are not important as long as certain principles are borne in mind. The drugs used are powerful and are both kidney irritants. Arsphenamin is also a liver irritant. Since these two organs may become pathologically involved in pregnancy, they should be watched carefully when the pregnant woman is having anti-syphilitic treatment. The urine should be tested for albumen before every treatment, the blood pressure observed frequently, and the bowels should be kept regular. It is usually well to administer a mild saline cathartic the morning of the day for an arsphenamin injection. According to Schamberg, the use of mercury and arsphenamin together is more toxic to the liver than the administration of each in a separate series. It has, consequently, been my habit to give five mercury injections, using the salicylate in oil. Then a series of three to ten arsphenamin injections at intervals of from three to ten days. As a rule, the shorter the interval between treatments the fewer injections are needed. However, during pregnancy it would seem advisable to give the injections at longer intervals and give more of them—e. g., one week apart and give five to eight, depending on the tolerance of the patient. This series would be followed by weekly mercury, beginning with ½ gr. and increasing gr. ss. each dose until 1½ to 2 gr. is reached, decreasing the dose if any signs of mercurialism appear. It should not be necessary to give more than one series of arsphenamin followed by mercury throughout the rest of pregnancy. This should insure the birth of a healthy child, but is not sufficient to cure the mother. A couple of months after the puerperium, treatment should be resumed and

continued at least one year to eighteen months after a negative blood has been obtained. The Wassermann reaction should be made at intervals of three months for the next two years, and every six months for the next three.

I believe, however, that should such a patient become pregnant again it is a matter of good insurance to the child that the mother resume mercury in some form during the pregnancy. Discretion is the better part of valor, and although we talk glibly of cures, we do not discharge a patient without a string attached to the prognosis.

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DISCUSSION

LYLE G. MCNEILE, M. D. (523 West Sixth Street, Los Angeles)—For many years the outpatient clinic has been giving anti-syphilitic treatment to all cases in which repeated abortions, stillbirths due to prematurity or to unexplained cause, and cases in which the fetus was macerated, regardless of the Wassermann test. Recently, we have been doing routine Wassermanns on all patients. Personally, I believe that we overlook many cases of latent syphilis, and that these unrecognized cases are responsible for quite a number of fetal deaths. This paper is very timely. The treatment appeals to me as being conservative and effective.

J. R. BOOTH, M. D. (First National Bank Building, Oakland)—Dr. Frost's paper covers the subject in a very interesting way. Although one may not agree with his conclusions in regard to the pregnant and non-pregnant woman, it is instructive.

There is some physiological reaction in the syphilitic pregnant woman which gradually tends to giving birth to a live child, other than the length of time since having the primary inoculation.

At present it is generally agreed that only after several distinctly positive cholesterinized antigen Wassermann reactions can the laboratory findings alone be depended upon. The clinical history is the best diagnosis in the final analysis.

Certain races are more apt to have it than others, and the economic conditions are a decided factor.

The latent syphilitic pregnant woman is the one we have mostly to deal with, and she will probably have all the customary symptoms of the pregnant woman, but they will be exaggerated. This is particularly so of the neuralgias and headache, which is apt to be persistent, and there may be insomnia. There may be some evidence of the infection of the skin, the mucous surfaces, eye, or of the bones.

The patient is not apt to abort, although syphilis was formerly considered the most likely cause, but she will probably go on through to the sixth or eighth month. There will be life until about a week or ten days before miscarriage. All life will cease and a macerated fetus will be born, or she may go on to full term if she is a multipara and give birth to a dead baby, or if she has had several, a live one which may or may not be sickly.

A primary uterine inertia often delays engagement and delivery for hours with final instrumentation.

We have the more difficult problem of diagnosis than in the treatment of them, but there are a few points to consider:

First. It is never too late to begin treatment, or too early after the birth to continue the treatment.

There should be great care of overtreatment, although pregnant women seem to stand treatment exceedingly well. Any syphilitic pregnant woman who has to be frequently examined because of the excessive treatment, rather than the regular observation that we give pregnant women, is getting too much treatment.

When we get a persistent positive Wassermann reaction, do not continue to inject to get a negative. Nor can we accept a negative finding too soon.

I have never seen the Herxheimer reaction, but imagine it can be easily induced. In any event, the suggestion that Frost makes that arsphenirini should be preceded by a series of mercurial rubs, or injections for days, is excellent.

THE PRESENT DAY ADVANCE IN PLASTIC SURGERY, WITH SPECIAL REFERENCE TO THE CORRECTION OF DEFORMITIES OF THE NOSE AND ABOUT THE ORBIT.

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PLASTIC SURGERY is an ancient art. To Aulus Cornelius Celsus, a Latin physician and philosopher, who is supposed to have lived in the time of Augustus, we owe our first authentic principles of the science. He introduced the Hippocratic system to the Romans, he being known as the Roman Hippocrates. His best work appeared in the De Medicena, the first edition of which was published in 1478 in Florence. One may find reference made to the art in the Sanskrit writing, and Susrata in his Ayur-Veda (the exact period is unknown) discloses the use of the rhino-plastic method. The art of plastic surgery seems to have waned throughout the Middle Ages and remained practically unknown for a time, finally being revived in the fifteenth century by Branca, a Sicilian surgeon, who established a reputation by building up noses, using the skin of the face. Following Branca are to be found the names of many eminent surgeons throughout the world who have contributed much to the art.

During and following the World War, because of the great influx of clinical material, great strides have been made, due to the various injuries and disfigurements. Many new methods have been tried with varying degrees of success and, due to the untiring efforts of some of the most capable surgeons, this branch of surgery is now a recognized art, applicable to the deserving who have suffered the wounds of battle, and not limited to satisfy the vanity of the less comely. It has taken the art out of the hands of the so-called beauty specialists and placed it on a firm and scientific basis, thanks to the efforts of some of our foremost surgeons, and it serves as a surgeons' contribution to humanity.

It will not be amiss to briefly discuss a few of the fundamental principles which are confronted by those undertaking the field of plastic surgery, and to enumerate a few of the essentials that, if observed, may save one from many of the pitfalls and serve to further demonstrate the underlying principles which lead to success. It goes without saying, that those venturing into the field of plastic surgery should be "disciples of Job," as patience and painstaking are two very essential factors. The desired results cannot always be obtained at one sitting, and the surgeon should be ever patient to wait and give nature a chance; a little at a time, done well, is far better than a gross attempt to accomplish the impossible at one sitting, which ofttimes spells failure and discouragement.

Plastic surgery is not what some may think; it is erroneously believed by many to be a dramatic field filled with glamor. How often does such an idea culminate in tragedy, and the overzealous and hurried surgeon finds that his labors have proved a failure! The temperament of the operator is of importance; here an artistic temperament is the *sine qua non,* for the ability to create and build lends